

A NEW SPECIES OF *PSEUDOGONATOPUS* FROM KENTUCKY (HYMENOPTERA: DRYINIDAE)^{1 2}

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ABSTRACT: The species *Pseudogonatopus similis* n. sp. is described, illustrated and compared with its closest relative *P. stenocrani* Perkins (= *stenocrani dubiosus* Perkins and *iowensis* Fenton). *P. similis* has been reared continuously in the laboratory for one year on delphacids of the genus *Delphacodes*. Thelytokus reproduction occurs in this species and the females vary greatly in size with the total length varying from one to four mm. Approximately 30 days are needed to complete a life cycle from egg to adult.

Two species of *Pseudogonatopus* have been reared in Kentucky from delphacids of the genus *Delphacodes*. Both species are very closely related and look much alike. Since one is a new species, it is necessary to describe both and give differences which will separate them.

Pseudogonatopus stenocrani Perkins

(Fig. 1)

Pseudogonatopus stenocrani Perkins 1905, p. 38; Kieffer 1907, p. 17. (Type female – Ohio, BPBM).

Pseudogonatopus stenocrani stenocrani Kieffer 1914, p. 81; Muesebeck et al. 1951, p. 1036.

Pseudogonatopus stenocrani var *dubiosus* Perkins 1905, p. 39; Kieffer 1907, p. 17. (Type female – Ohio, BPBM) NEW SYNONYM.

Pseudogonatopus stenocrani dubiosus Kieffer 1914, p. 82; Muesebeck et al. 1951, p. 1036.

Pseudogonatopus iowensis Fenton 1924, p. 190; Muesebeck et al. 1951, p. 1036. (Type female – Ames, Iowa, USNM) NEW SYNONYM.

This species was first described by Perkins (1905) from three female specimens from Ohio which had the tenth segment of the antenna white. The variety *dubiosus* was described at the same time on one female which differed only by not having the tenth segment of the antenna white. Fenton (1924) described *iowensis* from a single female specimen from Ames, Iowa which had the tenth segment of the antenna pale yellow. Upon examination of these five

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type specimens, one additional female specimen from Michigan and four other females from Lexington, Kentucky, it was found that they represent but a single species. This species can now be characterized as follows:

Length of female: Quite variable, usually 2-4 mm.

Color: Generally brown to dark brown. Pterothorax, propodeum and lateral parts of prothorax black. Antennae mostly brown, tenth segment light yellow to white, basal segments light yellowish-brown. Face yellowish-brown.

Head with vertex slightly convex, surface finely punctate. Prothorax anteriorly constricted, finely punctate, saddle-shaped. Propodeum with posterior surface transversely rugose. Chela (Fig. 1) with fifth tarsal segment with a slightly enlarged apical end with a brush of lamellae, basal arm with two rows of lamellae. Claw with a single row of lamellae, usually 6-8, with a single seta at end of row near apex, apex with a subapical tooth.

Type: Holotype female from Ohio, Koebele, no. 5851 in the Bernice P. Bishop Museum. Reared from a nymph of *Stenocranus dorsalis*.

Notes: This species has been reported as reared from either *Liburnia lutulenta* (now called *Delphacodes lutulenta*) or *Stenocranus dorsalis*. No males are known. This species is probably widely distributed throughout much of the eastern part of the United States. However, at present, it is only known from Iowa, Kentucky, Michigan and Ohio.

Specimens seen other than the types are as follows: Kentucky-Lexington, one female, July 14, 1975, P.H. Freytag (died July 15); two females, July 23, 1975, P.H. Freytag (both died July 24); and one female July 19, 1976, P.H. Freytag (died July 25) all in the University of Kentucky collection. Michigan-Midland County, one female, July 15, 1958, R.R. Dreisbach, in the Michigan State University Collection.



Fig. 1. *Pseudogonatopus stenocrani* Perkins, chela of female. Fig. 2. *Pseudogonatopus similis* n. sp. chela of female.

Pseudogonatopus similis n. sp.

(Figs. 2-6)

A species very closely related to *stenocrani* but differing by having the thorax entirely brown and the fifth tarsal segment not greatly expanded at apex.

Length of female: Quite variable, from 1-4 mm.

Color: Generally light brown to brown. Antennae brown with the tenth segment usually white. Face and basal segments of antennal light yellowish-brown.

Head with vertex slightly convex, surface finely punctate. Prothorax with a slight anterior constriction, finely punctate, saddle-shaped. Propodeum with the posterior surface finely rugulose. Chela (Figs. 2-6) with fifth tarsal segment slightly enlarged at apex, lamellae in two rows along arm extending to a small grouping on the apical end. Claw with one row of lamellae, usually 7-9, with a single seta at end of row near apex, apex with a subapical tooth.

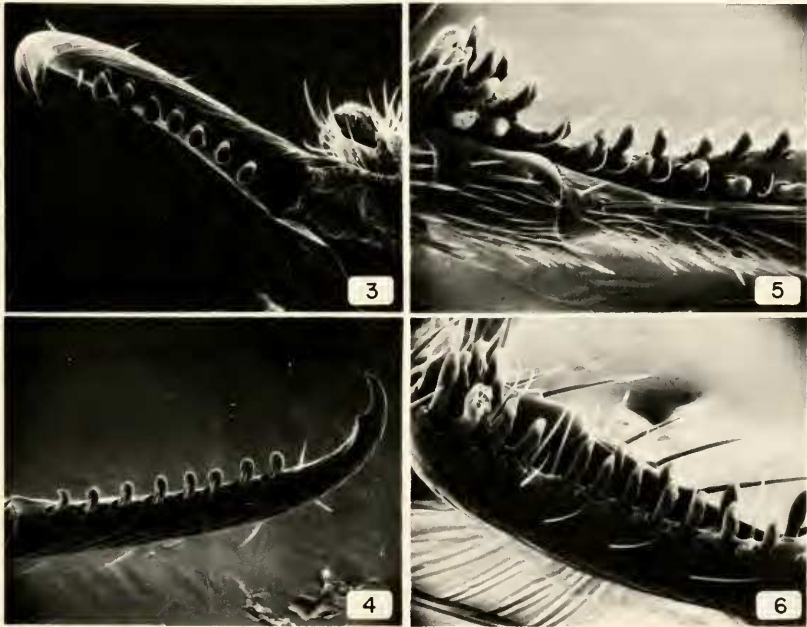


Fig. 3. *Pseudogonatopus similis* n. sp., claw of chela, ventral view, SEM photograph (500x). Fig. 4. *Pseudogonatopus similis* n. sp., claw of chela, lateral view, SEM photograph (500x). Fig. 5. *Pseudogonatopus similis* n. sp., apex of 5th tarsal segment, ventral view, SEM photograph (500x). Fig. 6. *Pseudogonatopus similis* n. sp., apex of 5th tarsal segment, lateral view, SEM photograph (500x).

Types: Holotype female, Lexington, Kentucky, June 7, 1976, P.H. Freytag (died June 27). Paratypes, 17 females, Lexington, Kentucky, June or July 1976, P.H. Freytag. All paratypes are offspring of the holotype, or the F_2 generation, reared in the laboratory on *Delphacodes lutulenta* (Van Duzee). The holotype and 10 paratypes are deposited in the U.S. National Museum collection. The remaining paratypes are deposited in the University of Kentucky collection.

Notes: This species has been continuously reared in the laboratory for more than a year. The data on the F_2 generation is given in Table 1. More than a thousand females have been reared without a single male specimen. Rearing conditions were usually maintained at 32°C and a 16-hour day. However, during the severe winter weather during January and February 1977 the temperature dipped to as low as 3°C for short periods. This change seemed to have little effect on this species except to lengthen the time for the life cycle. At normal rearing temperatures the life cycle from egg to adult takes approximately 30 days.

TABLE I
Data on F_2 Generation

Date Egg Layed	Number Parasitized	Approx. Date of Pupation	Adult Eclosed	Adult Died	
June 8	1	June 17	July 8	July 23	Paratype
June 8	1	June 17	July 8	July 26	Paratype
June 10	3	June 18	July 11	July 26	All Paratypes
June 14	1	June 22	July 14	July 26	Lost
June 14	2	June 23	died in cocoon		
June 15	1	June 23	July 14	July 26	Lost
June 15	2	died as larvae			
June 16	1	June 25	July 16	July 21	Paratype
June 16	1	June 25	July 19		Lost
June 16	1	June 25	died in cocoon		
June 17	1	June 25	July 19		Lost
June 17	2	died as larvae			
June 18	1	June 28	July 19	July 22	Paratype
June 21	1	June 28	July 20	Aug. 2	Paratype
June 21	1	June 28	July 24	July 26	Paratype
June 21	1	June 28	died in cocoon		
June 22	1	June 30	July 19	July 19	Paratype
June 22	1	June 30	July 25	July 26	Paratype
June 22	4	June 30	died in cocoon		
June 22	2	died as larvae			
June 23	3	July 2	July 25	July 26	All Paratypes
June 23	1	July 2	July 25		Lost
June 24	1	July 3	July 26	July 26	Paratype
June 24	2	July 3	July 26		Both Paratypes
June 24	3	July 3	died in cocoon		
June 25	1	July 6	died in cocoon		
June 26	1	July 6	July 27		Lost
TOTAL	41 parasitized		23 ♀ produced		

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**NEW NAME FOR *BRUNDINIA* ROBACK
NEC *BRUNDINIA* TOTTENHAM¹**

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It has recently been brought to my attention that *Brundinia* Roback 1978, p. 168 (Diptera) is a junior homonym of *Brundinia* Tottenham 1949, p. 78 (Coleoptera). Accordingly I should like to propose *Brundiniella* as a replacement name for *Brundinia* Roback nec Tottenham.

- Roback, S.S. 1978. The immature chironomids of the Eastern United State III. Tanypodinae-Anatopyniini, Marcropelopiini, and Natarsiini. Proc. Acad. Nat. Sci. Phila. 129: 151-202
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